

Utah Health Status Update: Neonatal Abstinence Syndrome

July 2013

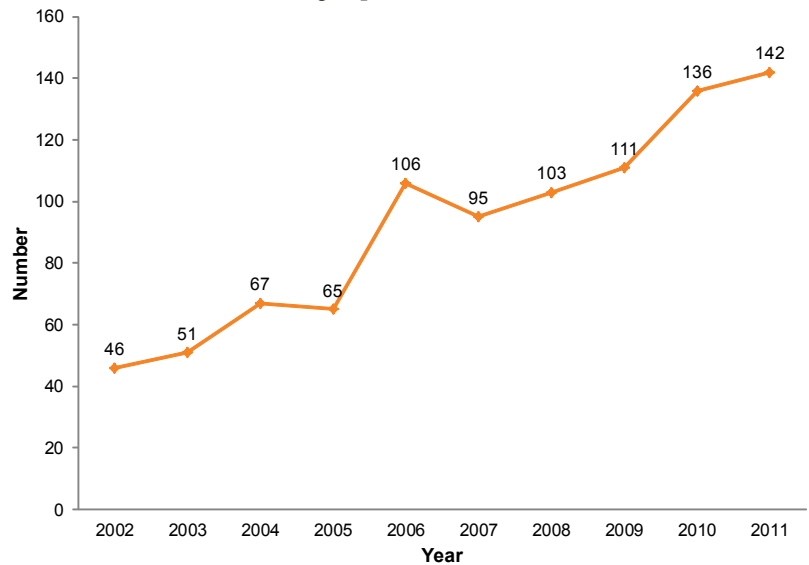
Neonatal abstinence syndrome (NAS) is a drug withdrawal syndrome that occurs in newborns exposed to addictive prescription or illicit drugs while in utero. These include some antidepressants, amphetamines, barbiturates, benzodiazepines, cocaine, marijuana, and opiates. The addictive substances pass through the placenta to the fetus during pregnancy resulting in a withdrawal period after birth when the baby is no longer receiving the drugs. Symptoms of withdrawal can appear from 1 to 10 days after birth and include diarrhea, excessive crying, fever, hyperactive reflexes, and sleeping problems.¹ Newborns with NAS are known to have an increased incidence of seizures, respiratory symptoms, feeding difficulties, and low birth weight.¹

The American Medical Association estimated that in the U.S. approximately one NAS infant was born every hour in 2009.¹ Between 2009 and 2012, 1,476 Utah mothers (approximately 369 mothers per year) were reported to have used illicit drugs. As a result, 29.5% of babies born to these mothers tested positive for illicit drugs at birth (approximately 109 babies per year). Utah has seen a steady increase in the number of hospital discharges as a result of complicated pregnancies or births due to a mother's drug dependence

- Neonatal abstinence syndrome (NAS) is a drug withdrawal syndrome that occurs in newborns exposed to addictive prescription or illicit drugs while in utero.
- Between 2009 and 2012, 29.5% of babies born to Utah mothers who were reported to have used illicit drugs tested positive for illicit drugs at birth (approximately 109 babies per year).
- Utah has seen a steady increase in the number of hospital discharges as a result of complicated pregnancies or births due to a mother's drug dependence between 2002 and 2011.
- Over the past decade the number of Utah newborns (birth to 28 days) diagnosed with NAS increased 242.7%.

Complicated Pregnancies or Births due to a Mother's Drug Dependence

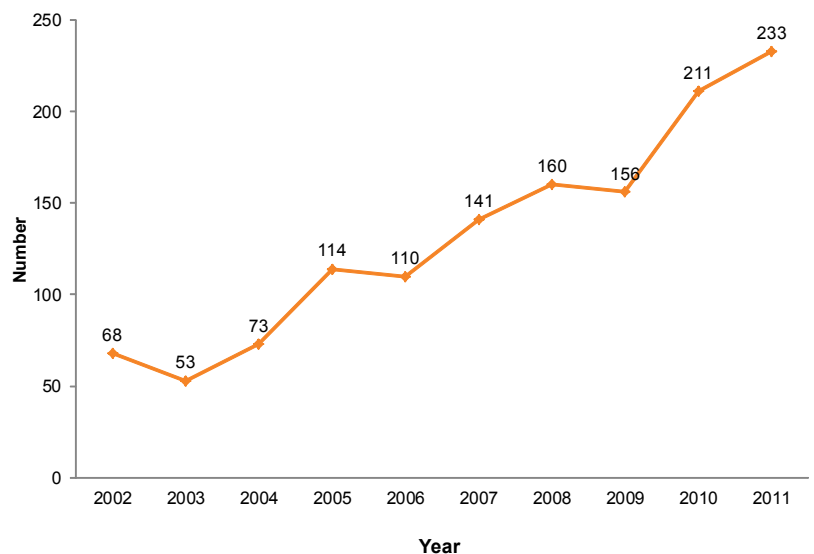
Figure 1. Number of hospital discharges as a result of complicated pregnancies or births due to a mother's drug dependence, Utah, 2002–2011



Source: Utah Hospital Discharge Data

Newborns with Neonatal Abstinence Syndrome

Figure 2. Number of newborns (birth to 28 days) with NAS, Utah, 2002–2011



Source: Utah Hospital Discharge Data

between 2002 and 2011 (Figure 1). It is important to note that these increases may also be attributed to better provider awareness and reporting.

Neonatal abstinence syndrome is affecting an increasing number of newborns as the rate of substance abuse (prescription and illicit) among pregnant women rises.² In the U.S., for births occurring in 2000 through 2009, the rate

of newborns diagnosed with NAS increased from 1.2 to 3.4 per 1,000 hospital births per year. During the same timeframe, the number of mothers using or dependent on opiates increased from 1.2 to 5.6 per 1,000 hospital births per year.² In Utah, for births occurring in 2006 through 2009, the rate of newborns diagnosed with NAS increased from 2.1 to 4.7 per 1,000 hospital births per year, or 0.21% to 0.47%. Over the past decade the number of Utah newborns (birth to 28 days) diagnosed with NAS increased 242.7% (Figure 2).

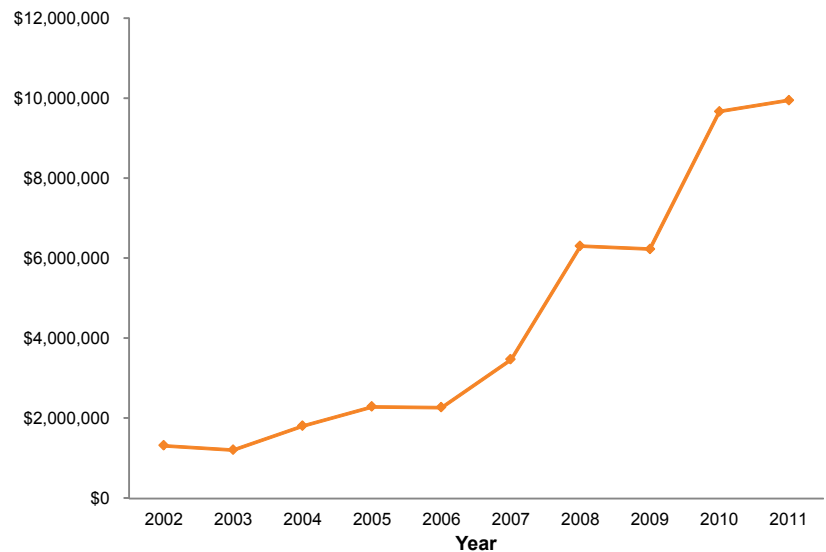
As with many health indicators, Utah is following the national trend of increasing numbers of newborns diagnosed with NAS. This growing trend is consistent with an increase in opiate use across the country. The Centers for Disease Control and Prevention found that in the U.S., sales and deaths related to opiate pain relievers quadrupled between 1999 and 2008.¹ National estimates show that between 2000 and 2009, total hospital charges for NAS jumped from \$190 million to \$720 million (adjusted for inflation).¹ Utah estimates total hospitalization charges associated with newborns (birth to 28 days) exhibiting drug withdrawal symptoms to be almost \$10 million in 2011 (Figure 3). In comparison, Utah's total hospitalization charges for mothers with drug dependence associated with complicated pregnancies or births was \$1.4 million in 2011.

Treatment for substance abuse for pregnant mothers and postpartum care of infants with NAS varies across the United States. In Utah in 2012, the public substance abuse treatment system was serving 17,026 adults or 17.0% of the current need.³ One can assume that the low capacity of the public substance abuse treatment applies to pregnant women as well as the general adult population needing substance abuse services. Of adult women in treatment, 6.0% (343) were pregnant at the time of admission representing the highest percentage since 2009.³ State and federal laws require treatment providers to admit pregnant women into care within 48 hours of their first contact with the treatment provider.

Women in treatment programs have the added benefit of improved access to care. Utah data show that an average of 7.3% of mothers who were reported on the birth certificate to be illicit drug users during pregnancy had no prenatal visits. Substance abuse treatment during pregnancy is a very complex condition which requires careful

Charges for Newborns with Neonatal Abstinence Syndrome

Figure 3. Charges for newborns (birth to 28 days) with NAS, Utah, 2002–2011



Source: Utah Hospital Discharge Data

assessment by health care providers who understand the impact of prescription and illicit drugs during pregnancy for the mother and the fetus.

For information about risks of prescription or illicit drugs during pregnancy and breastfeeding, the Utah Department of Health's Pregnancy Risk Line/MotherToBaby is an excellent resource for health care providers and mothers.

Pregnancy Risk Line / MotherToBaby:

1-801-328-2229 (SLC area)

1-866-626-6847 (Toll free)

References

1. A.D.A.M. Medical Encyclopedia [Internet]. Atlanta (GA): A.D.A.M., Inc.; Copyright © 2013. Neonatal abstinence syndrome; [Last reviewed: January 27, 2012; cited May 21, 2013]; [about 4 p.]. Available from: <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0004566/>
2. Patrick, S. W., Schumacher, R. E., Benneyworth, B. D., Krans, E. E., McAllister, J. M., & Davis, M. M. (2012). Neonatal abstinence syndrome and associated health care expenditures. *The Journal of the American Medical Association*, 307, 1934–1940.
3. Division of Substance Abuse and Mental Health 2012 Annual Report, Utah Department of Human Services Division of Substance Abuse and mental Health <http://www.dsamh.utah.gov/docs/Annual%20report%202012.pdf> (accessed 6/21/2013)

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Breaking News, July 2013

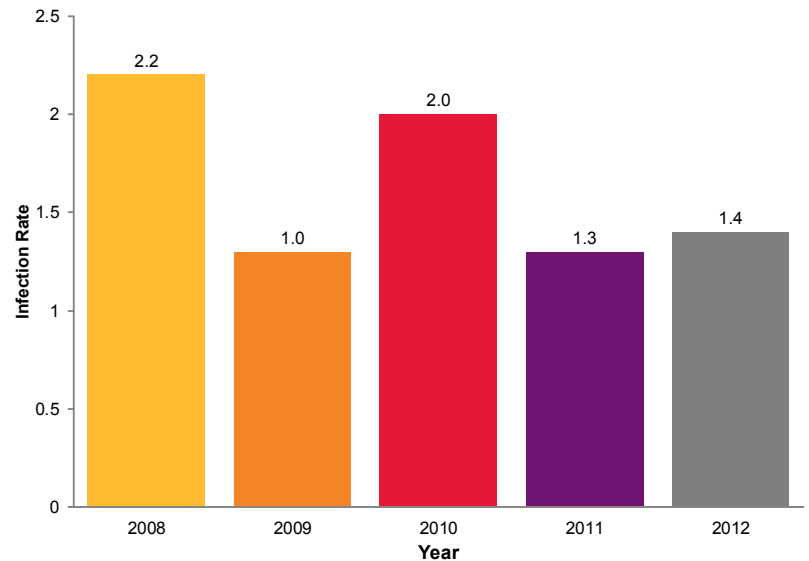
Public Reporting Regarding Healthcare-associated Infections

Previous reports published by the Utah Department of Health (UDOH) regarding healthcare-associated infections (HAIs) in Utah have not identified facilities by name. However, during the 2012 Utah Legislative Session, House Bill (HB) 55 was passed, requiring UDOH to access and analyze facility-specific National Healthcare Safety Network (NHSN) data and publish an annual HAI report for the public reporting data by named facility.

In 2011, 96 central-line associated bloodstream infections (CLABSIs) were reported in Utah and associated with 71,567 central line days (CLDs). Based on national data, patients in Utah hospitals had 37% fewer CLABSIs in 2011 than would have been predicted. Twenty-five facilities met the criteria for required CLABSI reporting. Of these 25, three facilities had significantly fewer infections, and one facility had significantly higher infections compared to what is expected nationally. Eleven facilities did not have enough usage of CLDs to provide an accurate assessment of their performance.

Overall, data show that CLABSIs from 2008 through 2011 in Utah hospitals ranged from a rate of 2.2 in 2008 to 1.0 in 2009 per 1,000 CLDs. Thus far, the trend in Utah has decreased over time, but it will be important to continue monitoring data to assess whether the trend holds.

State Mean Rate of Central Line-associated Bloodstream Infections per 1,000 Central Line Days, Utah, 2008-2012



Community Health Indicators Spotlight, July 2013

Utah's Disease Tracking and Management System

In 2009 the Utah Department of Health (UDOH) and Utah's 12 local health departments launched a new, statewide infectious disease tracking and management system called TriSano®. The major undertaking had begun just a year earlier when Utah's public health agencies, a software company, and the Utah Department of Technology Services (DTS) collaborated to develop a modern, web-based system to protect the public's health. That vision required that public health agencies be able to securely track, investigate, and respond to diseases across jurisdictional boundaries in real time.

TriSano® allows disease reporting among public health agencies to be electronic and automatic with fewer errors and a reduction in duplication of work. The system also has a flexible form builder tool that enables the quick creation of disease-/outbreak-specific questionnaire forms for use during investigations.

UDOH implemented a new feature this year, electronic laboratory reporting, which enables laboratories to report test results to UDOH in near real-time. The tool, combined with a centralized database, allows Utah public health agencies to share more accurate information faster, identify risk factors sooner, and more effectively gain the upper hand during times of unusual disease activity. The new system can also electronically transmit disease data to the Centers for Disease Control and Prevention, which can use the information to monitor and evaluate disease trends across the country.

Monthly Health Indicators Report

(Data Through May 2013)

Monthly Report of Notifiable Diseases, May 2013	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
Campylobacteriosis (Campylobacter)	44	41	170	134	1.3
Shiga toxin-producing Escherichia coli (E. coli)	10	6	29	18	1.6
Hepatitis A (infectious hepatitis)	0	1	4	3	1.3
Hepatitis B, acute infections (serum hepatitis)	0	0	1	4	0.2
Influenza	Weekly updates at http://health.utah.gov/epi/diseases/flu				
Meningococcal Disease	0	0	2	2	0.8
Pertussis (Whooping Cough)	17	54	338	223	1.5
Salmonellosis (Salmonella)	29	33	113	119	1.0
Shigellosis (Shigella)	1	2	9	13	0.7
Varicella (Chickenpox)	9	48	114	287	0.4
Quarterly Report of Notifiable Diseases, 1st Qtr 2013	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV/AIDS†	10	28	10	28	0.4
Chlamydia	1,828	1,740	1,828	1,740	1.1
Gonorrhea	149	93	149	93	1.6
Syphilis	16	7	16	7	2.2
Tuberculosis	8	9	8	9	0.9
Medicaid Expenditures (in Millions) for the Month of May 2013	Current Month	Expected/Budgeted‡ for Month	Fiscal YTD	Budgeted‡ Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 15.4	\$ 14.0	\$ 129.5	\$ 128.9	\$ 0.5
Inpatient Hospital	\$ 8.3	\$ 34.4	\$ 245.2	\$ 316.4	\$ (71.2)
Outpatient Hospital	\$ 4.4	\$ 8.4	\$ 60.1	\$ 76.9	\$ (16.8)
Long Term Care	\$ 12.8	\$ 8.3	\$ 147.1	\$ 142.7	\$ 4.4
Pharmacy ‡	\$ 8.1	\$ 11.5	\$ 126.0	\$ 125.9	\$ 0.1
Physician/Osteo Services §	\$ 4.1	\$ 8.9	\$ 69.5	\$ 81.5	\$ (12.0)
TOTAL HCF MEDICAID	\$174.8	\$ 169.9	\$1,863.7	\$1,868.6	\$ (4.9)

Program Enrollment for the Month of May 2013	Current Month	Previous Month	% Change¶ From Previous Month	1 Year Ago	% Change¶ From 1 Year Ago
Medicaid	260,046	260,437	-0.2%	254,331	+2.2%
PCN (Primary Care Network)	12,465	9,298	+34.1%	16,927	-26.4%
CHIP (Children's Health Ins. Plan)	34,563	34,711	-0.4%	37,059	-6.7%
Health Care System Measures	Annual Visits			Annual Charges	
	Number of Events	Rate per 100 Population	% Change¶ From Previous Year	Total Charges in Millions	% Change¶ From Previous Year
Overall Hospitalizations (2011)	280,830	9.3%	+0.8%	\$ 5,818.8	+7.4%
Non-maternity Hospitalizations (2011)	175,847	5.7%	+3.8%	\$ 4,909.9	+7.9%
Emergency Department Encounters (2011)	665,925	22.4%	+1.7%	\$ 1,309.5	+12.8%
Outpatient Surgery (2010)	362,106	12.4%	+13.2%	\$ 1,764.0	+20.4%
Annual Community Health Measures	Current Data Year	Number Affected	Percent/Rate	% Change¶ From Previous Year	State Rank# (1 is best)
Obesity (Adults 18+)	2011	472,400	24.4%	+1.3%	12 (2011)
Cigarette Smoking (Adults 18+)	2011	229,300	11.8%	+2.7%	1 (2011)
Influenza Immunization (Adults 65+)	2011	147,400	56.9%	-15.5%	41 (2011)
Health Insurance Coverage (Uninsured)	2011	377,700	13.4%	+26.4%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2010	231	8.1 / 100,000	+0.1%	19 (2009)
Poisoning Deaths	2010	342	12.0 / 100,000	-38.1%	47 (2009)
Suicide Deaths	2010	479	16.8 / 100,000	+5.8%	n/a
Diabetes Prevalence (Adults 18+)	2011	129,600	6.7%	-1.8%	6 (2011)
Poor Mental Health (Adults 18+)	2011	315,300	16.3%	-0.4%	17 (2011)
Coronary Heart Disease Deaths	2010	1,488	52.2 / 100,000	-0.4%	2 (2008)
All Cancer Deaths	2010	2,791	98.0 / 100,000	+7.9%	1 (2008)
Stroke Deaths	2010	736	25.8 / 100,000	-1.4%	13 (2008)
Births to Adolescents (Ages 15-17)	2010	876	14.3 / 1,000	-13.2%	17 (2009)
Early Prenatal Care	2010	38,124	73.1%	+2.1%	n/a
Infant Mortality	2010	251	4.8 / 1,000	-9.0%	3 (2008)
Childhood Immunization (4:3:1:3:3:1)	2010	38,900	70.6%	-7.8%	12 (2010)

† Diagnosed HIV infections, regardless of AIDS diagnosis.

‡ Includes only the gross pharmacy costs. Pharmacy Rebate and Pharmacy Part D amounts are excluded from this line item.

§ Physician/Osteo Services - Medicaid payments reported under Physician/Osteo Services does not include enhanced physician payments.

¶ % Change could be due to random variation.

State rank based on age-adjusted rates.

Notes: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance for West Nile virus has ended until the 2013 season.